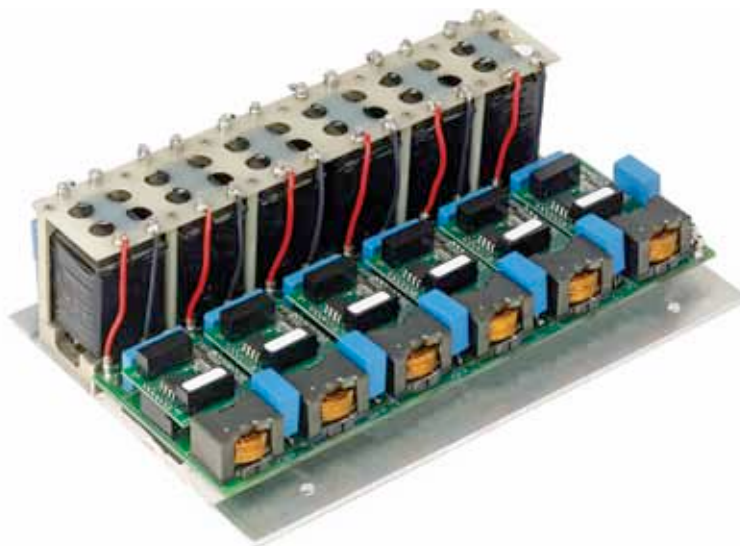


# Marotta develops 1-STEP AC-DC Conversion

**M**ilitary and industrial OEMs are continuously seeking improvements when it comes to their power conversion in extreme environments found under military, shipboard and aviation electronics. Multi-step regulation and isolation of electronic circuits is a complex and costly process that is commonly required for AC to DC conversion in high power applications, demanding close attention to performance requirements such as power factor and current distortion, as well as size, weight, efficiency and cost.

Marotta has developed a solution to this problem with their new patent-pending 1-STEP AC-DC Conversion, an innovative new circuit solution that uniquely achieves three-phase active power factor correction (APFC), power regulation and electrical isolation in a single conversion step. Marotta's new design ensures the highest power and efficiency while reducing costs.



By converting three-phase AC power to DC voltage for ready use in military and industrial applications, today's advanced power electronics circuitry is enabling the replacement of mechanical, pneumatic and hydraulic systems in mission-critical settings. The

resulting improvements in size, weight, power and cost (SWaP-C) are driving advancements in military platforms, shipboard systems and commercial aircraft.

Devices for converting a three phase power input to an adjustable DC output generally include

two steps: a rectifier stage for converting three phase AC input into a DC output, followed by a DC-DC conversion stage for adjusting the DC output voltage.

The DC-DC conversion stage may be capable of raising or lowering the DC voltage level, or both, depending on the particular features of a given device. At the same time, this type of complex power solution must pose a low technical risk, reducing the threat of failure as well as the cost of designing, manufacturing and maintaining the circuitry. The resulting circuitry must be operable in applications supplied by high frequency power, such as the 115V 400Hz AC power commonly used for aircraft.

1-Step represents a new solution in power technology, meeting these needs with the same or better power efficiency than existing solutions, and uniquely offering three-phase AC-DC conversion with regulated, isolated DC voltage in a single conversion step. ■



**roketsan**  
www.roketsan.com.tr

Visit us at:  
**FARNBOROUGH**  
**AIRSHOW**  
Hall 1 / B-110



**Roketsan design, development and production house of rockets and missiles in Turkey, is proud to offer its products and technological infrastructure to friendly and allied nations.**

 **ROKETSAN IS AN ESTABLISHMENT OF TURKISH ARMED FORCES FOUNDATION**